What’s Inside?

What is IWA?
Building a Case for Automation
Benefits of the New IWA Paradigm
Key Insights
EMC’s Solution
Outlook

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Introduction

The emphasis on corporate cost containment and productivity enhancement during the past decade has prompted accounts payable professionals to seek new ways to automate their paper based, labor-intensive processes. Furthermore, new compliance regimes have prompted a greater need to audit and mitigate the intrinsic risks associated with the payment process.

This report is designed for AP Managers, Controllers, Treasurers, and Financial Managers who are interested in:

- Exploring Imaging and Workflow Automation solutions for the reduction of paper- and people-based processes in the accounts payable areas of companies
- Understanding the business case for expanded use of imaging and workflow automation
- Taking the next step towards IWA adoption

This report is written for organizations that are actively exploring Imaging and Workflow Automation solutions. Beginning with an introduction to how IWA solutions work, it describes the most common forms that the solutions take, and highlights the benefits that they deliver. The vendor solution profiles are identically structured and provide specific information about individual vendors and the solutions they offer. The report will conclude with analytical insights that will help the reader compare and contrast vendors and their solutions.

This white paper provides an overview of the Imaging and Workflow Automation solutions available today. It will aid potential buyers in the AP space in their evaluation of AP solutions that reduce costs and improve performance.
Organizations today are swimming in paper, even as the futuristic aspirations of a paper-free workplace have proven more difficult than putting a man on the moon. Furthermore, with the passage of the Sarbanes-Oxley (SOX) Act of 2002, the profile of Accounts Payable departments is far higher. Today’s emphasis on cost-containment, productivity enhancement, and risk-management has highlighted the limitations of traditional, paper-based methods of accounts payable and procurement processes.

Organizations are in the process of moving towards automating their accounts payable processes, capturing these productivity and visibility gains: (Table 1):

<table>
<thead>
<tr>
<th>Back End Document Capture &amp; Archival</th>
<th>Front-end Document &amp; Data Capture</th>
<th>Front-end Capture &amp; Workflow</th>
</tr>
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<tbody>
<tr>
<td>Alleviates lost &amp; misplaced invoices</td>
<td>Removes paper where it enters the organization</td>
<td>Streamlines &amp; accelerates approval processing</td>
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<tr>
<td>Allows simultaneous access to invoice information</td>
<td>Allows image-enabled approval processing</td>
<td>Aids in Sarbanes-Oxley and other regulatory compliance initiatives</td>
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<td>Simplifies discrepancy resolution, transaction research, audits &amp; supplier inquiries</td>
<td>Accelerates invoices’ entry into approval queues</td>
<td>Tightens overall control over approval processing</td>
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<tr>
<td>Provides secure electronic storage for invoices</td>
<td>Speeds data collection &amp; entry into financial systems</td>
<td>Provides transaction-level visibility into invoice receipt-to-pay activities</td>
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<tr>
<td>Reduces storage costs</td>
<td>Reduces manual data entry &amp; FTE requirements</td>
<td>Enhances prompt payment discount capture &amp; reduces incidence of late fees</td>
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These factors greatly increase efficiency and lower costs in an AP department, concurrently maximizing compliance requirements with these tools:

- Project management tools that speed approval workflows while providing proper documentation and audit trails
- Capabilities that improve and standardize costly and/or superfluous business process
- Document and data retention and archival, efficiently meeting specific regulatory requirements
What is Imaging and Workflow Automation?

Imaging and Workflow Automation (IWA) solutions streamline the invoice receipt-to-pay cycle, enabling organizations to (1) convert paper invoices into digital images, (2) store them in a Web-enabled repository for rapid retrieval, and (3) extract data from them to enhance approval processing.

IWA solutions may also provide document and data capture and workflow, in order to create an end-to-end invoice management and approval platform that integrates with enterprise applications.

**Figure 2** outlines the IWA Universe.

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**The Components of an IWA Solution**

**Invoice Receipt Functionality:**
- Receiving and data capture, manually or via automated sorting, or by front-end data keying.
- A Web-enabled interface that allows suppliers to upload invoices directly into the ERP or concurrent IWA system.

**Document and Data Capture:**
- Conversion of paper invoices and transaction-related documents into digital images and index data. Functionality may include scanning, image enhancement, indexing, validation, and data extraction based on bar-codes, OCR, or manual data entry.
Vendor Portal:
- Allows suppliers to submit invoices electronically
- Some vendor portals offer auto-validation of invoices to check for exceptions
- Portals also allow suppliers to perform Purchase Order flips (Auto-conversion of a PO into an invoice), attach and view documents from their own accounting systems, and self-service exception-resolution and approval-status

Content Storage and Management:
- Allows for the delivery, storage, management, and disposition of electronic documents and data.
- This may include Enterprise Content Management (ECM) or Business Process Management (BPM) capabilities for managing the transactional content across its entire lifecycle.

Workflow Management:
- Allows for the routing of tasks according to pre-defined business rules and based on individuals’ roles and access rights.
- Workflow provides a tool to track and manage approval processing at the invoice and aggregate level.
- Common features include automatic notifications to users when specific actions are required, reminder messages, and escalation procedures based on approval hierarchies.

Reporting and Analysis:
- Analyze key invoice receipt-to-pay metrics
- Typical reporting and analysis tools include the generation of standard and ad hoc reports that detail those invoices pending approval, unpaid invoices past due, and average invoice processing time.
Benefits of a New Paradigm

Many innovative financial managers are now recognizing that accounts payable automation offers significant potential, not only generating bottom-line improvements, but also a greater ability to monitor and manage spend, strengthen working capital positions, and build stronger and more collaborative trading relationships.

Our research suggests that these forces have sharply increased organizations’ interest in automation solutions, which streamline and optimize accounts payable operations to deliver both operational and strategic benefits.

Increasingly, organizations are recognizing that the transition from manual and expensive paper-based processes to more efficient and cost-effective straight through processing can be achieved through multiple small steps rather than a “big bang” initiative. The first step toward this goal is the removal of paper from the invoice-receipt and approval process. There is little doubt that the market is moving in this direction as companies realize that, in order to achieve strategic goals – working capital improvement and spend management – they must first streamline their invoice processing to accelerate the approval and payment of invoices.

Until recently, automation efforts in the accounts payable area were solely focused on invoice and document management, and the operational benefits that this technology delivers. PayStream defines these as the first two stages of automation, wherein organizations are focused on centralizing their invoice management processes and leveraging document scanning to compress the time it takes for invoices to enter the approval workflow. However, this is only half the story. Figure 3 outlines the various stages of automation that an organization can experience as it adopts technology to increase process efficiency and control costs, especially as stages 3 and 4 are achieved.
Many companies are currently in the third stage of automation, wherein they are leveraging electronic functionality to receive invoices, as well as employing advanced OCR technologies to extract invoice information from paper invoices. Furthermore, these organizations are utilizing automated matching and approval and collaborative online dispute resolution functionalities.

Another trend is the outsourcing of certain low-value AP tasks such as document scanning, data extraction and data entry. This allows AP professionals to focus on more mission-critical tasks, such as invoice approval, dispute resolution and discount capture. Accounts payable business process outsourcers (BPOs) are not necessarily new, but they are now gaining popularity as organizations comprehend the benefits of leveraging the technology and process expertise of an outsourced service provider to perform non-core activities. Further, these outsourced solutions are just now reaching maturation with the advent of collaborative web-enabled technologies.

Finally, a few savvy organizations are moving into the fourth stage of automation, wherein they are eliminating paper to a significant extent by primarily receiving invoices via electronic means. Problematic supplier behavior has traditionally hampered adoption of IWA technologies, and automation vendors are delivering tremendous value in this field by offering aggressive supplier on-boarding and enablement services. Solution providers work closely with buyers to segment vendors and initiate campaigns—email, direct mail and telephone—that migrate vendors from paper to electronic invoice delivery.

These innovative buyer organizations also reduced the volume of invoices flowing through the approval process by taking advantage of straight-through-processing (STP) to manage clean invoices (invoices that do not have any errors or those that meet certain pre-determined criteria). This empowers organizations to direct valuable AP resources toward managing exceptions and accelerating dispute resolution.

While there is no doubt that a significant benefit that companies derive while they move from the first stage to the fourth stage of automation is lower processing costs, the greatest value is found in the strategic benefits that automation affords—namely, increased supply chain visibility, improved working capital requirements and better trading partner relationships.
Key Insights

PayStream Advisors predicts that the market for accounts payable or invoice automation solutions will grow rapidly over the next five years. Accounts payable departments’ share a significant portion of the billion dollar imaging and workflow automation pie, that, while small today, will expand as AP departments seek to streamline and optimize their operations and adapt to changes of regulatory regimes.

PayStream Advisors also believes that the following factors will shape the evolution of the accounts payable solution market, and organizations contemplating an accounts payable or invoice automation solution will want to take them into account:

- **Advanced OCR will be a catalyst for adoption.** Solutions that rely on template-based Optical Character Recognition (OCR) to extract data from invoices have experienced mixed success: While sufficient for AP departments that receive invoices in a just a handful of formats, OCR has historically proved inadequate for operations that see a myriad of formats every day. The application of invoice automation solutions to improve invoice management has suffered thanks to the past-failures of OCR technologies. However, recent strides in OCR, with the emergence of industrial-strength solutions that do not rely upon templates, will be a key driver of adoption.

- **Imaging & workflow solutions and 'Web invoicing' will cross pollinate.** Imaging and workflow solutions have evolved to meet organizations’ internal needs around invoice receipt and management. However, as the Internet expands into all corners of business communication, the distinction between internal and external processing is breaking down. This is already affecting the accounts payable automation solution market, thanks to the rise of Web invoicing solutions that provide functionality that is designed to facilitate buyer supplier collaboration. Ultimately, accounts payable departments will benefit as solutions incorporate advanced collaborative functionality for invoice receipt, approval processing, and discrepancy resolution, improving control and efficiency.

- **Front end solutions will prevail.** Accounts payable or invoice automation solutions are beneficial in all of their forms. However, front end solutions preserve the benefits of back end imaging and archival while providing additional advantages in the form of lower costs, higher processing efficiency, and enhanced visibility and control. They can be used to replicate and accelerate existing work patterns or to design entirely new electronic processes. Organizations will continue to use accounts payable automation solutions in both a back and front end capacity, but the latter will eventually prevail.
• **Organizations will seek ‘straight-through-processing’**.
  As automation moves to the front-end of the accounts payable process, organizations will also seek to leverage “straight-through processing,” so that AP staff and approvers can focus on more value-added tasks. Demand will increase for solutions that leverage this technology by delivering auto-matching and auto-approval of “clean” invoices, as well as approval workflow that manages exceptions and dispute resolution in a collaborative manner.

• **Impact of AP Automation on the financial supply chain.**
  Until recently, automation efforts in the AP area were focused on invoice and payment management and the operational benefits that technology delivers. However, savvy finance executives are considering the more strategic impact of AP automation on the financial supply chain and the working capital improvements that automation delivers. Innovative and mature solutions that meet organizations’ strategic objectives offer platforms that unlock significant dollars from the financial supply chain via advanced features such as vendor self-service, visibility and DPO maximization with collaborative payment approval, and dynamic settlement.

• **Multiple solution models will co-exist.**
  There is not a single model for an accounts payable automation solution. Solutions are available in software form, as well as on an outsourced basis. Likewise, some vendors emphasise a modular “mix and match” approach while others concentrate on providing a single platform. There is also tremendous variability in terms of solution focus. Some vendors focus tightly on specific aspects of the invoice receipt to pay cycle, while others strive to provide accounts payable automation functionality as part of a larger ECM or BPM solution. Industry consolidation notwithstanding, research shows that this diversity will continue.
EMC Corporation

EMC Corporation is a leading provider of information storage and management products, services and solutions that enable organizations to manage, access and share their information efficiently. With more than 100 sales office and partners in over 50 countries, EMC has a global presence in the information management market.

EMC’s portfolio offers over 100 products in the enterprise content management and archival category, including EMC Documentum and EMC Captiva for enterprise customers and EMC ApplicationXtender for commercial, small to medium business and government customers. The company leverages its core enterprise document management products to deliver InputAccel for Invoices, a solution geared specifically toward the accounts payable market. Documentum delivers a range of imaging and workflow services, including the ability to image paper invoices through a sophisticated capture solution, acceptance of electronic invoices and approval workflow process automation through a complete business process management (BPM) solution.

EMC’s resellers include Dell, NEC, Fujitsu, Unisys, Groupe Bull, and NCR. EMC has also formed alliances with leading software, networking, and services companies like Cisco, Microsoft, SAP, Oracle, Accenture, and EDS to better serve its customers. Additionally, EMC works with numerous partners like Imagitek Ltd., BRT, Mackin Imaging Systems, Matrix Imaging Solutions, Paragon, Perficient, and NMS Imaging, which specialize in implementing EMC’s product within AP operations.

The company targets its solution toward aerospace & defense, automotive, consumer products, discrete manufacturing, financial services & insurance, government & military, healthcare, high tech, life sciences, media & entertainment, process manufacturing, publishing and retail industry verticals. A shortlist of EMC’s clientele boasts major customers like AJC International, Brown-Foreman, and Marathon Oil.

**EMC Documentum**

*Invoice Receipt*

EMC Captiva InputAccel for Invoices offers an open front-end capture/input solution that allows the system to easily accept multiple document formats, such as paper and fax documents, electronic forms, emails and EDI feeds, thereby accelerating receipt of invoices into the organization. The solution reduces the amount of manual intervention required by transforming paper invoices into digital images from which invoice data is automatically extracted, validated, and delivered, by utilizing advanced document capture technology. Additionally, organizations can leverage eInput, a Web-based, thin-client solution offered by EMC Captiva, to capture and submit scanned document images and electronic files from remote locations.

Captured and indexed invoices are stored in the EMC Documentum repository. By streamlining and accelerating the invoice receipt to approval process, organizations can take advantage of early payment discounts, eliminate late payments, reduce errors, increase reporting accuracy and free AP staff for other tasks.

*Document and Data Capture*

With the EMC Captiva document capture platform, paper invoices and other transaction-related documents like proofs of receipt are converted into digital images.
and index data. We really liked the fact that Captiva can interface with more than 300 different models of scanners and deliver technology specifically optimized for data capture from invoices. The solution integrates seamlessly with ERP systems and validates data captured through the optical character recognition (OCR) process against data from the ERP system.

The solution enables the high-speed automatic classification, indexing, extraction and validation of invoices, which eliminates the need for manual sorting. The automatic classification is accomplished by identifying documents using a combination of text- and image-based analysis technologies. Automatic classification, combined with advanced data extraction capabilities that use pre-defined business rules and a sophisticated recognition engine, and sophisticated indexing capabilities allow for an efficient indexing and validation process. Company representatives claim that accuracy in the information recognition and capture process is typically greater than 90 percent, depending on the document type.

**Vendor Portal**
EMC provides two different approaches for organizations that want to implement and deploy a vendor portal. Customers can build and manage a vendor portal by using EMC Documentum Web content management, which allows accounts payable staff and vendors to exchange invoices and manage the process. This option manages the content and the underlying structure and publishing process for Web portals. Alternatively, existing portal technologies can also be leveraged by incorporating content management, search, and collaboration applications alongside other portal applications, such as customer relationship management, supply chain management, or enterprise resource planning.

Customers can configure the portal to pull information from the repository and third party systems for validation of invoices. Business rules for validation can be configured within the portal, as EMC Documentum’s unified platform provides the ability to configure business rules within a workflow application to the portal leveraging Documentum’s Web content management. EMC Documentum business process management provides the ability to design, execute, and monitor invoice processes. Clients can speed process modeling and orchestration with easy-to-use graphical tools, streamline task processing using the business process engine, and optimize ongoing processes with analysis and activity monitoring.

**Content Storage and Management**
Enterprises can archive all types of content with EMC Documentum’s solution, with the ability to apply consistent security, retention, and storage policies. Users set classification, security, and retention policies from a single interface for both dynamic and fixed content. A wide variety of features are available for search and retrieval, including full-text indexing and searching, federated search, full-text structured metadata searches, and a ‘snapshot’ of the document that is provided in the initial results list display.

**Workflow Management**
A wide variety of workflow functionality is provided by EMC Documentum, from basic workflow to more structured life-cycle workflow to full featured BPM capabilities. BPM functionality delivered by ECM Documentum leverages a unified, scalable platform for design and execution of business processes. Administrators can create and manage multiple workflow servers, business processes, transactions, and user re-assignment and reconciliation. EMC Documentum provides the ability to route work to any user including re-routing work when necessary, forwarding work, and
routing between people, roles, and applications. The solution supports customizable role hierarchy and business rules, with integrations to external business roles, like vendors as well.

EMC Documentum’s process monitoring application provides alerts, dashboards, and reports on process execution data. This application tracks and reports on key performance indicators (KPIs) configured by the organization. The solution also works with the ERP and financial systems to post approved transactions to the general ledger.

**Reporting & Analysis**

The solution offers comprehensive audit trails for both system and user events. Strong reporting capabilities come standard with the solution, along with administration tools that allow users to track usage and other activities in the audit trail. Documentum’s functionality coupled with pre-built templates, designed by Paisley Consulting, facilitate Sarbanes-Oxley compliance. The templates allow groups to import content from shared drives and evaluate, test, and certify the effectiveness of controls needed. The open architecture of the application allows customers to leverage third party reporting tools such as Crystal Reports.

**Implementation**

EMC’s solution can be implemented either by EMC (via EMC Consulting) or by one of its many partners. Depending on the complexity of the solution and the modules selected, an implementation can range between two weeks and several months. EMC employs a well-defined methodology when implementing its solution, including determination of detailed system requirements, implementation and integration, unit and system testing, acceptance testing, production deployment, and post go-live support. The fee structure for EMC’s solution varies with the particular application implemented. The company offers both concurrent and user pricing and page per year pricing models, with add-on modules priced based on the CPU. A variety of support packages are offered as well.

**Outlook**

EMC Documentum started its journey in the content management space with solutions tailored to a specific set of industry needs within a vertical market. Over the years, the company expanded its footprint to deliver a content management platform that can be used by any organization and applied across the enterprise. What we really liked about EMC Documentum is its ability to leverage technology and partners to deliver an end-to-end solution for accounts payable and other specific business processes.

EMC is committed to the imaging and business process management market segment. With a global presence and a steady history of releases, EMC has proven to be a strong player in the AP automation market. Overall, EMC Documentum is a robust and comprehensive solution that eases the pain of accounts payable approval processing and is worth investigating by any organization seeking to automate this traditionally paper-intensive process.
AJC International: Instant Access to Invoices

AJC International is a world leader in marketing and distributing frozen and refrigerated food products. The company’s logistics department manages a portfolio of over 450,000 metric tons of refrigerated food products, transported between 140 countries on six continents. Until recently, AJC International’s nine regional offices worldwide manually processed and stored their own invoices. Each regional office entered basic information into the company’s Oracle’s Financial systems, however, the headquarters had limited visibility as to the company’s AP liability status and had no insight into the details of invoices received in regional offices.

Lack of Global Visibility

“Oracle Financial reports could show that three invoices totaling $54,000 were outstanding, but for product details AP staff had to ask regional office employees to search through file cabinets to find the specific invoices,” explains Perry Penders, global IT manager, AJC International. “Or if a supplier called to inquire about the status of a payment, someone had to look for the invoice, which could be sitting in a folder, or someone’s desk, or worse, it could be misplaced.”

Complying with audits was also time-consuming and cumbersome. Whenever the company was audited, AP staff in the regional offices had to search for paper invoices, scan them and email the images to headquarters. The AP staff at headquarters then had to track down copies of the checks issued to pay the invoices.

Centralized Invoice Repository

AJC needed a centralized repository of information that the AP staff in all offices could easily access. To truly streamline processing, the solution also needed to integrate with the company’s Oracle E-Business Suite. Based on his past experience at other companies, Penders chose the EMC® Documentum® enterprise content management platform to centrally manage AP content and documents at AJC.

Today AJC’s nine regional offices worldwide scan a total of approximately 1,000 to 1,500 invoices each week. Whenever an invoice enters one of these offices, an employee scans it into the central Documentum repository, accessible by authorized AJC employees from any Web browser. EMC Captiva® InputAccel® applies image enhancement and optical character recognition (OCR) technology to the scanned image to enable full-text searching on the document.

An employee then enters a few fields of data needed by the Oracle E-Business Suite (supplier name, supplier site, invoice date, amount, currency, and purchase order number) into a triboni Integrated Services ERP Connector software interface. The triboni software then automatically links the scanned invoice document in the Documentum repository to the company’s Oracle transactional records and workflow. Another process running in the background matches the numbers of checks scanned at headquarters with the appropriate invoices and links the check and invoice objects within the Documentum repository.

Freeing up AP Staff

AJC has increased efficiency in AP so much that two FTE have been freed to do more value-added work. “Being able to look up any invoice from anywhere, in seconds, saves minutes every day – and days or even weeks during audits,” says Penders. AJC is also reaping the benefits of global visibility. It can quickly determine the total outstanding invoices by country, region, or other criteria and management has visibility into the company’s overall AP liability at any time. The risk of lost or
misplaced invoices has been virtually eliminated and AJC can respond much quicker to supplier inquiries.

**Further Automation on the Cards**
AJC is planning to leverage the Documentum platform in the customer and supplier portal under development. Integrated with a home-grown application, the Documentum system will manage a range of customer and supplier-specific documents and publish them to the portal, allowing customers and suppliers to access this information quickly and easily. Additionally, AJC expects to save $180,000 annually, primarily from reduced shipping expenses.

Going forward, AJC plans to use other EMC products to further enhance management of AP content. AJC intends to add Documentum functionality to extract invoice attachments on incoming emails. AJC also plans to use EMC Documentum Retention Policy Services to automatically apply retention policies and expiration notifications in conformance with record-keeping best practices.
About PayStream Advisors, Inc.

PayStream Advisors is a technology research and consulting firm that improves the way companies plan, evaluate, and select emerging technologies to achieve their business objectives. PayStream Advisors assists clients in sorting through the growing complexities of IT applications related to business process automation with the goal of making objective, analytical, and actionable recommendations. Wherever business process automation technology is an issue, PayStream Advisors is there to help. For more information, call (704) 523-7357 or visit us on the Web at www.paystreamadvisors.com.

About the Lead Analyst

Davis Kuykendall is a research analyst with PayStream Advisors, Inc, specializing in Accounts Payable automation technologies. In addition to working in the research end of AP technologies, Davis also participates in client engagements and technology strategic projects.

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<table>
<thead>
<tr>
<th>Business Process Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Process Outsourcing</td>
</tr>
<tr>
<td>Dynamic Payables Discounting</td>
</tr>
<tr>
<td>E-Procurement</td>
</tr>
<tr>
<td>Supply Chain Management</td>
</tr>
<tr>
<td>Enterprise Content Management</td>
</tr>
<tr>
<td>Imaging/Workflow/Document Mgmt.</td>
</tr>
<tr>
<td>Purchasing Card (P-Card)</td>
</tr>
<tr>
<td>Recovery Audit Services/Solutions</td>
</tr>
<tr>
<td>Supplier Electronic Payments</td>
</tr>
<tr>
<td>Contract Management/Payment Review</td>
</tr>
<tr>
<td>Healthcare Document Imaging</td>
</tr>
</tbody>
</table>

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